A Retrospective Evaluation of the Class of Malocclusion amongst Orthodontic Patients at the University Of Nigeria Teaching Hospital (UNTH), Enugu, Nigeria

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*Abstract*_____

Objectives: *The aim of this study was to evaluate the type of malocclusion amongst orthodontic patients in the UNTH.*

Methods: *A retrospective evaluation of patients who attended the Orthodontic unit of the University of Nigeria Teaching Hospital from January 2008 to January 2010 was carried out to determine the type of malocclusion. Demographic data of the patients and information on first molar relationship were obtained from the patient's record file.*

Results*: A total of 75 patients, 21 males (28%) and 54 females (72%) were seen. The age range of the patients studied was 6 to 63years with the most frequent age group being 6 to 15 years, consisting 52.1% of the total patients seen. Class 1 molar relationship was the most prevalent occurring in 60% of the cases.*

Conclusion*: There were more females who attended the Orthodontic unit within this 2 year period. Class 1 malocclusion was the most common type of malocclusion.*

Keywords: Malocclusion; class of malocclusion; orthodontic patients.

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Introduction:

Several studies had been carried out to determine the type of malocclusion among patients presenting at different orthodontic centres.[1-7] Parameters like molar relationship, overbite, overjet and intra-arch relationships have been studied among different ethnic groups[2, 3, 4, 5,7, 8, 9.]

The Aim of the present study was to evaluate the type of malocclusion amongst orthodontic patients in the UNTH, Enugu, and to determine the pattern of distribution of the anterior-posterior relationships of the jaws as described by Angle [1] amongst patients who attended the orthodontic unit of the UNTH from January 2008 to January 2010.

Materials and Methods

This retrospective study was carried out at the orthodontic unit of University of Nigeria Teaching Hospital Enugu. Data was obtained from patient's record files after obtaining clearance from the hospital's ethical clearance committee. A total of 75 patient records were included in the study and they were those who had never had any orthodontic treatment in the past.

Information which included sex, age and molar relationship were extracted from the record files and the variables were analysed descriptively

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using the Statistical Package for Social Sciences (SPSS) Program version 12.

Results

A total of 75 record files of patients who attended the orthodontic unit from January 2009 to January 2010 were analysed. The age range of the subjects was 6 to 65years with a mean age of 17.8±10.9 years. Most of the patients were in the age category of 6 to 15years. (Table1). There were 21(28%) males and 54 (72%) females. (Table 2). Angle's Class 1 molar relationship was the most common and was noted in 45 (60.8%) of the subjects. Of these, 39.2% were females while 21.6% were males. Class 11 was found in 11(14.9%) of the subjects while Class 111 was noted in 18 (24.3%) of cases. (Table 3).

Table 1: Sex Distribution

Sex	Frequency	Percentage
Males	21	28
Females	54	72
Total	**75**	**100**

Table 2: Age Distribution

Age (Mean = 17.8±10.9 years)	Frequency	Percentage
6 to 15 years	39	52.1
16 to 26 years	23	30.5
27 to 65 years	13	17.4
Total	**75**	**100**

Table 3: **Molar Relationship**

Sex		Class 1	Class II	Class III	Total
Male	(Number)	16	1	3	20
	% of total	21.6%	1.4%	4.1%	27%
Female	(Number)	29	10	15	54
	% of total	39.2%	13.5%	20.3%	73%
Total	(Number)	45	11	18	74
	% of total	60.8%	14.9%	24.3%	100%

Discussion

Despite many published research work on the type of malocclusion in Nigeria and the world over, it is difficult to compare the results because of the various methods and indices used to assess these relationships. Examiner variability and sample size may also affect the result. The method used in this study was to collect case notes of patients and extract information needed.

Angles Class 1 Malocclusion was found to be the most common, and was found in 60.8% of the subjects. One study found it to be 50%, and the most common amongst adolescents in Ibadan Nigeria.[3] However, another study on orthodontic patients at the University college Hospital, Ibadan put the value at 76.5%, still making it the most common.[5] A study at the Lagos University Teaching Hospital found it to be 80%.[7] Among Latin adolescents a value of 69.4% was recorded[6] while a researcher in Anatolia (Turkey) reported a much lower value of 34.9%.[10]

In this study Class 11 malocclusion was found to occur in 14.9% of the subjects. One study had recorded a value of 15.4%,[7] which is very similar to our findings. The prevalence of Class III Malocclusion in this study was 24.3%. Lower values were recorded by some researchers, one had a value of 4.1%,[7] while another had 9.1%[6] . A similar study conducted at Ibadan found class 111 malocclusion to be 11.8%[3].

More females 54 (72%) sought treatment within the study period. The most frequent age group was 6 to 15 years, indicating that parental influence played a part in patients seeking for treatment and implying a poor awareness of orthodontics among older age group. More females (72%) and males (28%) were noted to have attended the orthodontic unit within the 2-year study period.

The researchers note that a number of patients that attended the Orthodontic Clinic during the research period could not be included in this study as the Angle"s molar relationships were not recorded in their case notes. A standardised form for clinical assessment is therefore necessary in view of future studies.

Although the findings of this research is consistent with those of previous studies further studies to determine the pattern of malocclusion in a larger population in South Eastern Nigeria is recommended.

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